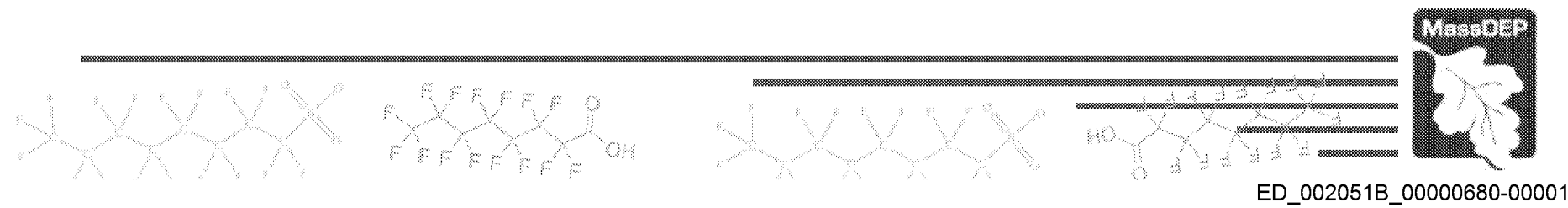


# MassDEP Drinking Water Guideline for the UCMR3 Longer Chain PFAS

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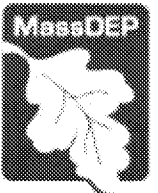
Director, Office of Research and Standards

6/20/2018




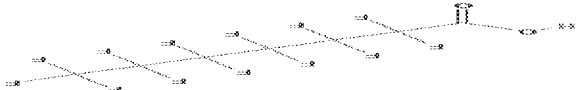




# Background

- Unregulated Contaminant Monitoring Rule (UCMR) 3 included 6 PFAS
  - PFOS; PFOA; PFNA; PFHpA; PFHxS; PFBS
- Nationally, about 1% > EPA HA (PFOS/PFOA)
- MA about the same
  - 171 PWS tested: 5 detects/2 above HA
  - Additional sites identified
- PFAS beyond PFOS and PFOA detected
  - No EPA Health Advisories for the others
- ORS asked to develop recommendations



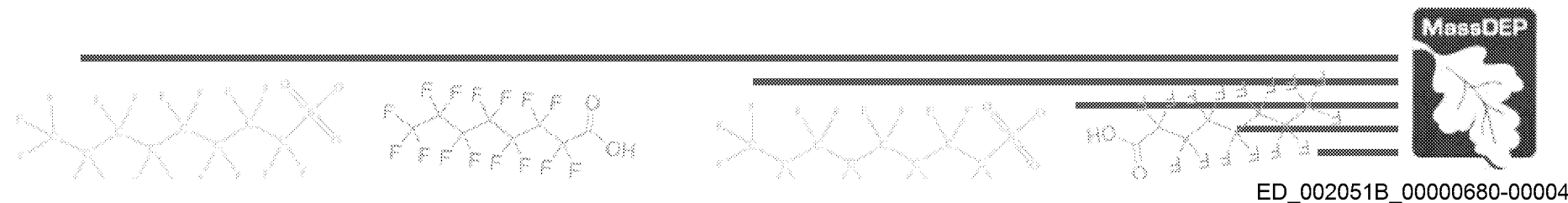
# UCMR 3 PFAS

UCMR 3 PFAS	Chemical Structure	<i>In vivo</i> toxicity*	Half - life In body
<b>Perfluorooctanoic acid</b> 335 - 67 - 1 Carbons = 8 Fluorinated Carbons = 7	PFOA 	1	3.5 years
<b>Perfluorooctanesulfonic acid</b> 1763 - 23 - 1 Carbons = 8 Fluorinated Carbons = 8	PFOS 	1	4.8 years
<b>Perfluorononanoic acid</b> 375 - 95 - 1 Carbons = 9 Fluorinated Carbons = 8	PFNA 	>/= 1	3.2 years
<b>Perfluoroheptanoic acid</b> 375 - 85 - 9 Carbons = 7 Fluorinated Carbons = 6	PFHpA 	NA	NA
<b>Perfluorohexanesulfonic acid</b> 355 - 46 - 4 Carbons = 6 Fluorinated Carbons = 6	PFHxS 	>/= 1	7.3 years
<b>Perfluorobutanesulfonic acid</b> 375 - 73 - 5 Carbons = 4 Fluorinated carbons = 4	PFBS 	< 0.01	0.1 year



# ORS Recommendations

- Treat the five longer carbon chain UCMR 3 PFAS the same
  - Same approach as adopted by Connecticut Department of Public Health (CT DPH)
- Further assessment needed for PFBS
- Reviewed and endorsed by MassDEP Health Effects Advisory Panel
  - Technical experts in toxicology; risk assessment and public health/MADPH



# Status

- MA Drinking Water Guideline formally adopted:
  - 70 ppt for sum of the 5: PFOs; PFOA; PFNA; PFHxS; PFHpA
  - MA MCL under consideration
- Guideline being implemented by MA Drinking Water Program
  - Public notification
  - Expeditious steps to reduce levels
- PFAS also being addressed under MA Hazardous Waste Site program
- Waste Site Cleanup Standards being developed

